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PTO/SB/21 (02-04)

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<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	10/822,111	
	Filing Date	April 9, 2004	
	First Named Inventor	David K. Bidner	
	Art Unit		
	Examiner Name		
Total Number of Pages in This Submission	24+	Attorney Docket Number	81100062

ENCLOSURES (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance communication to Technology Center (TC) <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): - PTO 1449 Form - Copies of Foreign References
<b>SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT</b>		
Firm or Individual name	John D. Russell, Registration No. 47,048 Kolisch Hartwell, P.C.	
Signature		
Date	June 15, 2004	

CERTIFICATE OF TRANSMISSION/MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.			
Typed or printed name	Lauren Barberena		
Signature		Date	June 15, 2004

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Date: June 15, 2004

DAVID K. BIDNER and  
GOPICHANDRA SURNILLA

Serial No. : 10/822,111

Filed : April 9, 2004

For : DEGRADATION DETECTION METHOD FOR AN  
ENGINE HAVING A NOX SENSOR

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

S i r :

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 C.F.R. §§ 1.56, 1.97, and 1.98**

Applicants are submitting this Information Disclosure Statement pursuant to 37 C.F.R. §§ 1.56, 1.97, and 1.98 to disclose to the U.S. Patent and Trademark Office the patents, publications, applications, and/or other references listed on the enclosed, completed PTO-1449 forms. The filing of this Information Disclosure Statement should not be construed as a representation that a search has been made or as an admission that the listed references are prior art for this application. Applicants respectfully request that the listed references be expressly considered during prosecution of the application, and that the references be made of record therein and appear among the "references cited" on any patents issuing therefrom.

**CONTENT OF DISCLOSURE**

This Information Disclosure Statement includes (1) 12 pages of PTO-1449 forms, and (2) a legible copy of each foreign and

non-patent reference, if any, listed on the forms. However, because this application was filed on or after July 1, 2003, no copies of U.S. patents or published U.S. patent applications are included.

#### **FOREIGN-LANGUAGE REFERENCES**

A concise explanation of the relevance of each listed reference not in the English language follows:

Japanese Patent No. 62-97630: This patent purports to disclose a method to provide a protective adherent material having excellent transparency and light resistance after it is adhered by solving a problem that a conventional organic ultraviolet absorbent deforms or bleeds on a surface when it absorbs ultraviolet rays for a long time and a problem that a conventional inorganic ultraviolet absorbent has a strong coloring property so that obtaining of ultraviolet absorbing effect without losing transparency is difficult.

On one face of a base film, an ultraviolet absorbing layer in which a titanium oxide having a particle diameter of 0.05µm or less and fine particle of zinc oxide having a particle diameter of 0.05µm or less are dispersed and a protective layer are formed in sequence, and an adhesive layer is formed on other face. Accordingly, a transparent ultraviolet absorbing protective film will have remarkably excellent transparency and ultraviolet absorbing property, since it is provided with the ultraviolet absorbing layer having the specified fine particle dispersed therein in the composing layer.

Japanese Patent No. 62-117620: This patent purports to disclose a method to efficiently perform denitration by bringing NO<sub>x</sub> into contact with a catalyst under the presence of O<sub>2</sub> to oxidize and absorb it and stopping the pass of exhaust gas at the point of time when the absorption efficiency of the catalyst

is reduced and using a gaseous reducing agent to reduce NO<sub>2</sub> of the catalyst.

Exhaust gas discharged from a manifold is introduced into an oxidizing catalyst to convert CO into CO<sub>2</sub> and introduced into either catalyst of the parallel catalysts A, B and NO<sub>x</sub> is oxidized and absorbed to the catalyst under the presence of O<sub>2</sub>. Various metals such as Mn and Fe, oxide thereof and composite oxide are used as the catalyst. When exhaust gas is introduced into the catalyst layer of one hand for a specified time and absorption efficiency is reduced, the flow of exhaust gas is changeovered to the catalyst layer of the other hand and H<sub>2</sub> is introduced into the catalyst layer wherein exhaust gas is not flowed from an H<sub>2</sub> generator to remove NO<sub>x</sub> and the catalyst is regenerated.

Japanese Patent No. 2-30915: This patent purports to disclose a method to accurately judge the degradation of catalytic converter rhodium when an instrumentation time is less than a predetermined time by measuring a time from when an internal combustion engine is shifted to rich operation condition to when the output of an air/fuel ratio sensor at the down stream side of the catalytic converter is reversed to rich condition.

Respective air/fuel ratio sensors c, d are provided at the upper and down stream sides of catalytic converter rhodium b provided at the exhaust passage a of an internal combustion engine and the air/fuel ratio of the internal combustion engine is adjusted by a means e according to those respective detected results. At this time, reverse between the lean and rich condition of the output of the down streamside air/fuel ratio sensor d is judged by a means (f). The operation condition of the internal combustion engine is judged by a means g that theoretical air/fuel ratio operation condition is shifted to

rich operation condition. Further, a time from the shift to when the output of the down streamside air/fuel ratio sensor d is reversed from lean condition to rich condition is measured by a means h. When the measured time is less than a predetermined time, the degradation of the catalytic inverter rhodium b is judged by a means t.

Japanese Patent No. 2-33408: This patent purports to disclose a method to get rid of wrong discrimination of catalytic degradation by measuring a discharging time of O<sub>2</sub> from tree way catalyst at a time of forced conversion to the state of a rich or theoretical air fuel ratio so as to indirectly measure the maximum storage quantity of O<sub>2</sub> of the three way catalyst.

An air fuel ratio adjusting means A adjusts an air fuel ratio of an engine according to outputs V<sub>1</sub>, V<sub>2</sub> of air fuel ratio sensors on the upstream and downstream sides of three way catalyst CCRO. A time measuring means B measures a time T<sub>A</sub> since it is judged that an operating state has transited from a lean operating state to a rich or theoretical air fuel ratio operating stage by a rich/lean operation state transition discriminating means C until it is discriminated that the output V<sub>2</sub> of the air fuel ratio sensor on the downstream side has reversed from the lean to the rich by a repeat discriminating means D. And a catalytic degradation discriminating means E discriminates that the tree way catalyst has degraded when the measured discharging time T<sub>A</sub> of O<sub>2</sub> from the three-way catalyst is shorter than a fixed time. Thus it is possible to discriminate the degradation of the three-way catalyst precisely.

Japanese Patent No. 2-207159: This patent purports to disclose a method to judge deterioration with high precision by judging that a ternary catalyst is deteriorated when the time until the output of an air-fuel ratio sensor on the downstream

side of the ternary catalyst is reversed from rich to lean after the air-fuel ratio of an engine is reversed from rich to lean is the preset time or below.

The air-fuel ratio of an engine is adjusted by a means D in response to outputs of air-fuel ratio sensors B and C on the upstream side and the downstream side of a ternary catalyst A installed on the exhaust passage of an internal combustion engine. When the engine is in the preset operation state, the air-fuel ratio of the engine is forcefully made rich by a means E, then it is reversed to lean. A means F judges that the output of the air-fuel sensor C on the downstream side is reversed from rich to lean. The time until the output of the air-fuel ratio sensor C on the downstream side is reversed from rich to lean after the air-fuel ratio is forcefully reversed is measured by a means G. When the measured time is the preset time or below, a means H judges that the ternary catalyst A is deteriorated.

Japanese Patent No. 3-135417: This patent purports to disclose a method to decompose NO<sub>x</sub> with reduction catalyst without the need of ammonia by adsorbing NO<sub>x</sub> in the exhaust gas of engine, desorbing it with the combustion gas of low O<sub>2</sub> concn., and passing it through the reduction catalyst to decompose NO<sub>x</sub> into N<sub>2</sub> and O<sub>2</sub>.

There are provided the NO<sub>x</sub> adsorption unit 4 in which zeolite, etc., is used as an adsorbent, a high temp. gas generation unit 7, and a reduction unit 5 provided with the reduction catalyst. NO<sub>x</sub> in combustion gas is adsorbed in the NO<sub>x</sub> adsorption unit 4, and then desorbed by the high temp. gas of low O<sub>2</sub> concn. sent from the high temp. gas generation unit 7, and the desorbed NO<sub>x</sub> is decomposed by the reduction unit 5 into N<sub>2</sub> and O<sub>2</sub>. As a result, the NO<sub>x</sub> in the exhaust gas of engine, especially of diesel engine, is removed. The device of this

system is allowed to be miniaturized because reduction gas, such as ammonia, is not used.

Japanese Patent No. 5-26080: This patent purports to disclose a method to prevent the lowering of NOx purifying ability when air-fuel ratio control is changed from a lean control mode to a theory air fuel ratio control mode, by controlling the air-fuel ratio on a rich side until the output of a rear oxygen sensor is reversed to the theory air fuel ratio side from the lean side.

A catalyst converter 3 housing a lean NOx catalyst 4 and a ternary catalyst 5 is furnished at the middle of an exhaust gas pipe passage 2, and front and rear oxygen sensors 6, 7 are provided at the upstream and downstream parts of this converter 3. And an air fuel ratio is controlled by means of an ECU 8 on the basis of the output of the front sensor 6, and also the control of the air-fuel ratio is corrected on the basis of the output of the rear sensor 7, and at the same time the air fuel ratio is controlled by changing it to a lean control mode A or a theory air-fuel ratio control mode B according to an engine operation situation. On the occasion of this air-fuel ratio control, when the air-fuel ratio is changed to the B from the mode A, arrangement is made so that the air-fuel ratio may be controlled on the rich side until the output of the rear sensor 7, from the viewpoint of the air-fuel ratio, is changed to the theory air-fuel ratio side from the lean side.

Japanese Patent No. 5-106493: This patent purports to disclose a method to accurately determine whether or not a catalyst is deteriorated by considering the characteristics of O2 storage ability of the catalyst.

A first time measuring means M1 measures the length of time TL between the point of time when an air fuel ratio control means M1 changes the air fuel ratio to the Lean side and the

point of time when the output of a downstream side O2 sensor RS changes from Rich to Lean side. A second time measuring means M2 measures the length of time TR between the point of time when the air fuel ratio is changed to the Rich side and the point of time when the output of the downstream side O2, sensor RS changes from Lean to Rich side. A catalyst deterioration means M4 determines whether or not a catalyst is deteriorated when the average of the lengths of time TL and TR is shorter than a specified length of time. The lengths of time TL and TR are successively measured in that order to allow both length of time for the catalyst to absorb O2 and NOx and length of time to absorb CO and HC to be properly considered, so that the O2 storage ability of the catalyst can be accurately detected to allow accurately determining whether or not the catalyst is deteriorated.

Japanese Patent No. 5-106494: This patent purports to disclose a method to provide a catalyst deterioration determination device which is rarely affected by the dispersion and deterioration of unitary performance of an O2 sensor.

Ordinarily, a first air fuel ratio control means M1 feed-back- controls an air fuel ratio based on the output of both an upstream side O2 sensor FS and a downstream side O2 sensor RS for a catalyst C. When an operation state determination means M3 identifies a specified engine operation state, an adjustment means switch means M4 switches from a first air fuel ratio adjustment means M1 to a second air fuel ratio adjustment means M2 and feed-back-controls the air fuel ratio based on only the output of the downstream side O2 sensor RS. At this time, a time measuring means M6 measures the length of time between the point of time when the amount of skip which causes the increase of the air fuel ratio occurs and the point of time when a reverse determination means M5 detects the reversal of the output of the



downstream side O2 sensor RS and when the length of time becomes shorter than a specified value, a catalyst deterioration determination means M7 determines that the catalyst C is deteriorated.

Japanese Patent No. 6-58139: This patent purports to disclose a method to reduce the coat and improve the purge efficiency as the thermal damage of the adsorbent of an adsorbing device is prevented from occurring.

A bypass passage B is arranged in an exhaust gas passage A, an adsorbing device C is located in the bypass passage B, and a catalyst device D is arranged in the exhaust gas passage A situated downstream from the bypass passage B. When the adsorbent temperature of the adsorbing device C is below first set value, a total amount of exhaust gas is introduced to the bypass passage B by means of a control valve E alone to adsorb HC. When it exceeds a second set value, purge control of HC is effected through control of an amount of exhaust gas introduced to the bypass passage B so that an adsorbent temperature is held at a second set temperature lower than an adsorbent limit temperature. Further, from a change amount of an air-fuel ratio in exhaust gas, detected by an oxygen sensor H during purge control, to the rich side, it is decided that purge is completed.

Japanese Patent No. 6-264787: This patent purports to disclose a method to maintain an exhaust nature favorable even at the time of detection of a lean NOx catalyst and improve the fuel consumption performance.

In an engine purifying NOx generated at the time of burning fuel at a lean air fuel ratio by a lean NOx catalyst, deterioration of the lean NOx catalyst is judged (S41). Thereafter, an objective lean air fuel ratio set at an air-fuel ratio at which fuel consumption becomes most favorable in an

initial state is gradually made lean in accordance with progress of deterioration of the lean NOx catalyst.

Japanese Patent No. 7-97941: This patent purports to disclose a method to effectively purify NOx during lean-burning driving by temporarily switching the driving state to that having the stoichiometric air-fuel ratio or the excessive rich side air-fuel ratio when NOx purifying efficiency of an NOx purifying member having specific property is deteriorated during lean-burning driving of an internal combustion engine.

In an internal combustion engine 1, an intake passage 3 and an exhaust passage 4 are respectively communicated to a combustion chamber 2 through an intake valve 5 and an exhaust valve 6. And a NOx purifying member 100 and a catalytic converter rhodium 10 are respectively arranged in the exhaust passage 4 from the upstream side in this order. That is, since the NOx purifying efficiency of the NOx purifying member 100 is decreased with time when the engine is driven by lean-burning, the NOx purifying member is so set as to have property wherein the NOx purifying efficiency is restored when the driving state is switched to that having the stoichiometric air-fuel ratio or the excessive rich side air-fuel member 100 is deteriorated during lean-burning driving of the internal combustion engine 1, the driving state is temporarily switched to that having the stoichiometric air-fuel ratio or the excessive rich side air-fuel ratio.

German Patent No. 19607151: This patent purports to disclose a method in which a Nitrogen oxides storage catalyst (4) is regenerated in accordance with the operational state of the catalyst (4). During regeneration, the mixture supplied to the internal combustion engine corresponds to a stoichiometry ratio less than one (rich), ahead of the catalyst. The operational state corresponds to at least a limiting quantity of

NOx compounds issuing from the catalyst. The quantity of NOx is evaluated from a characteristic diagram, which is a function of the loading and rotary speed of the engine.

Japanese Patent No. 11-101154: This patent purports to disclose a method to appropriately determine saturation and deterioration of NOx catalyst on the basis of an output from an NOx sensor by compensating an error in NOx density upon detection caused by individual difference among NOx sensors or an aging effect.

An electronic control unit 23 obtains an averaged value of outputs from an NOx sensor 26 when an engine 1 is operated in a specified operating condition in which the output of the sensor 26 is set, and reads a reference sensor output value indicating a normal sensor output, from a memory device in the electronic control unit in accordance with an engine operating condition so as to compensate the output value of the sensor 26 with the use of a sensor calibration value obtained from the averaged sensor output value and the reference sensor output value.

Japanese Patent No. 2000-282942: This patent purports to disclose a method to correct shift in the output originating from degradation, etc., of an NOx sensor.

An NOx occluding/reducing catalyst 7 is installed in the exhaust passage 2 of an internal combustion engine 1, and the NOx concentration in the exhaust gas after passage of catalyst 7 is detected by an NOx sensor 33. An electronic control unit (ECU) 30 of an engine 1 operates the engine with the rich air-fuel ratio for a short time each time the sensed NOx concentration increases to a prescribed value and performs the regenerative process of the NOx occluding/reducing catalyst 7. Also the ECU learns the shift of the NOx sensor output from the reference value (output corresponding to the NOx concentration being zero) and the NOx sensor output, when the engine is operated in the

condition that the NOx emission in the low-load operation, etc., at a lean air-fuel ratio is less and also the NOx occluding/reducing catalyst is functioning normally, i.e., in the condition that the NOx concentration in the exhaust gas reaching the NOx sensor becomes approx. zero and then corrects the NOx sensor output on the basis of the learnt value.

#### **TIMING OF DISCLOSURE / FEE INFORMATION**

This Information Disclosure Statement is being filed either (1) within three months of the filing date of a national application other than a continued prosecution application under 37 C.F.R. § 1.53(d), or (2) within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application. Therefore, in accordance with 37 C.F.R. § 1.97(b), no fee or statement under 37 C.F.R. § 1.97(e) is required.

Please contact the undersigned with any questions or comments regarding this Information Disclosure Statement.

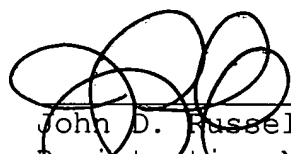
#### **CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on June 15, 2004.

  
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FORM PTO-1449

INFORMATION DISCLOSURE  
CITATION IN AN APPLICATIONDOCKET NUMBER  
FGT 335CONAPPLICATION NUMBER  
10/822,111APPLICANT(S)  
David K. Bidner & Gopichandra SurnillaFILING DATE  
April 9, 2004

GROUP ART UNIT

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FIL. DATE IF APPROP.
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	ALAN F. DIWELL, "Engineered Control Strategies For Improved Catalytic Control of Nox in Lean Burn Applications", SAE Technical Paper No. 881595, 1998, pp. 1-11

EXAMINER

DATE CONSIDERED



FORM PTO-1449		DOCKET NUMBER FGT 335CON		APPLICATION NUMBER 10/1822,111			
INFORMATION DISCLOSURE CITATION IN AN APPLICATION		APPLICANT(S) David K. Bidner & Gopichandra Surnilla					
		FILING DATE April 9, 2004		GROUP ART UNIT			
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EXAMINER			DATE CONSIDERED			

				SHEET <u>4</u> OF <u>12</u>			
FORM PTO-1449  INFORMATION DISCLOSURE CITATION IN AN APPLICATION			DOCKET NUMBER FGT 335CON		APPLICATION NUMBER 10/822,111		
			APPLICANT(S) David K. Bidner & Gopichandra Sumilla				
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	3-135417	06-10-1991	JP			Abstract only	
	0444783	09-04-1991	EP				
	0503882	09-16-1992	EP				
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	5,473,890	12-12-95	Takeshima et al			
	5,483,795	1-16-96	Katoh et al			
	5,531,972	7-2-96	Rudy			
	5,544,482	8-13-96	Matsumoto et al			
	5,551,231	9-3-96	Tanaka et al			
	5,554,269	9-10-96	Joseph et al			
	5,564,283	10-15-96	Yano et al			
	5,577,382	11-26-96	Kihara et al			
	5,595,060	1-21-97	Togai et al			
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	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO
	0503882	09-16-1992	EP			
	5-26080	02-02-1993	JP			Abstract only
	5-106493	04-27-1993	JP			Abstract only
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	5,598,703	2-4-97	Hamburg et al			
	5,617,722	4-8-97	Takaku			
	5,622,047	4-22-97	Yamashita et al			
	5,626,014	5-6-97	Hepburn et al			
	5,626,117	5-6-97	Wright et al			
	5,642,703	7-1-97	Stockhausen et al			
	5,642,709	7-1-97	Ozaki et al			
	5,655,363	8-12-97	Ito et al			
	5,657,625	8-19-97	Koga et al			
	5,657,732	8-19-97	Wolters et al			
	5,693,877	12-02-97	Ohsuga et al			
	5,713,199	2-3-98	Takeshima			
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	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO
	5-106494	04-27-1993	JP			Abstract only
	0580389	01-26-1994	EP			
	6-58139	03-01-1994	JP			Abstract only
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	5,715,679	2-10-98	Asanuma et al			
	5,722,236	3-3-98	Cullen et al			
	5,724,808	3-10-98	Ito et al			
	5,727,528	3-17-98	Hori et al			
	5,729,971	3-24-98	Matsuno et al			
	5,732,554	3-31-98	Sasaki et al			
	5,735,119	4-7-98	Asanuma et al			
	5,740,669	4-21-98	Kinugasa et al			
	5,743,084	4-28-98	Hepburn			
	5,746,049	5-5-98	Cullen et al			
	5,746,052	5-5-98	Kinugasa et al			
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	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO
	6-264787	09-20-1994	JP			Abstract only
	7-97941	04-11-1995	JP			Abstract only
	2307313	05-21-1997	GB			
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	5,752,492	5-19-98	Kato et al			
	5,758,493	6-2-98	Asik et al			
	5,792,436	8-11-98	Feeley et al			
	5,802,843	9-8-98	Kurihara et al			
	5,803,048	9-8-98	Yano et al			
	5,831,267	11-3-98	Jack et al			
	5,832,722	11-10-98	Cullen et al			
	5,842,339	12-1-98	Bush et al			
	5,842,340	12-1-98	Bush et al			
	5,865,027	2-2-99	Hanafusa et al			
	5,877,413	3-2-99	Hamburg et al			
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	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES      NO
	19607151	07-10-1997	DE			Abstract only
	98/27322	06-25-1998	WP			
	0859232	08-19-1998	EP			
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	5,910,096	6-8-99	Hepburn et al			
	5,929,320	7-27-99	Yoo			
	5,938,715	8-17-99	Zang et al			
	5,953,907	9-21-99	Kato et al			
	5,966,960	10-19-99	Hatano et al			
	5,970,707	10-26-99	Sawada et al			
	5,974,788	11-2-99	Hepburn et al			
	5,974,791	11-02-99	Hirota et al			
	5,974,793	11-2-99	Kinagusa et al			
	5,974,794	11-2-99	Gotoh et al			
	5,979,161	11-9-99	Hanafusa et al			
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	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO
	11-101154	4-13-99	JP			Abstract only
	2000-282942	10-10-00	JP			Abstract only
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	5,983,627	11-16-99	Asik				
	5,992,142	11-30-99	Pott				
	5,996,338	12-07-99	Hirota				
	6,003,308	12-21-99	Tsutsumi et al				
	6,012,282	1-11-00	Kato et al				
	6,012,428	1-11-00	Yano et al				
	6,014,859	1-18-00	Yoshizaki et al				
	6,023,929	2-15-00	Ma				
	6,026,640	2-22-00	Kato et al				
	6,058,700	5-9-00	Yamashita et al				
	6,073,440	6-13-00	Douta et al				
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	6,082,176	7-4-00	Kondo et al			
	6,092,369	7-25-00	Hosogai et al			
	6,105,365	8-22-00	Deeba et al			
	6,119,449	9-19-00	Kohler			
	6,128,899	10-10-00	Oono et al			
	6,134,883	10-24-00	Kato et al			
	6,138,453	10-31-00	Sawada et al			
	6,145,305	11-14-00	Itou et al			
	6,148,612	11-21-00	Yamashita et al			
	6,161,378	12-19-00	Hanaoka et al			
	6,167,695	1-2-01	Itou et al			
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	6,214,207	4-10-01	Miyata et al			
	6,263,666	7-24-01	Kubo et al			
	6,309,536	10-30-01	Inagaki et al			
	6,311,480	11-6-01	Suzuki et al			
	6,375,828	4-23-02	Ando et al			
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